

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-009039**Date Inspected:** 16-Sep-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Zhu Zhong Hai, Mr. Zhong Guo Hui, Mr. Zheng Zhi Wei, Mr. Li Zhijiang.

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Bay 2

This QA Inspector observed ZPMC welder Mr. Rao Wei, stencil 049972 is using shielded metal arc process WPS-B-T-2112 to tack OBG floor beam fillet weld FB3094-001-027. This QA Inspector observed a welding current of approximately 160 amps, the base material is clean where the tack welds were being made and Mr. Rao Wei is certified to make this weld. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch and it appears to be connected to the welding power supply cable. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder stencil 206358 is using welding procedure specification WPS-B-T-2132-3-3F (2F) to make flux cored weld FB3094-001-051. The QA Inspector observed ZPMC Quality Control personnel monitoring the base material temperature and other welding attributes. This QA Inspector

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measured a welding current of approximately 300 amps and 29.5 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

OBG Bay 3

This QA Inspector observed ZPMC welder Mr. Wang Lin Jiang, stencil 051356 is using flux cored welding procedure WPS-B-T-2232-TC-U4b-F to make floor beam weld FB023-010-027. This QA Inspector observed a welding current of approximately 260 amps and 27.3 volts. The welding procedure specification lists a minimum voltage of 280 volts and Mr. Wang Lin Jiang appears to be welding with a voltage that is 2 volts below the minimum listed in the welding procedure. This QA Inspector informed CWI Mr. Li Zhijiang that this voltage appears to be below the low limit and after QC confirmed the voltage was low, Mr. Zhijiang had the welding machine adjusted to approximately 300 amps and 31.8 volts. Items observed by the QA Inspector do not appear to fully comply with project specifications.

OBG Bay 5

The QA Inspector observed ZPMC welder Mr. Xi Xuehua, stencil 058174 is using the flux cored process WPS-B-T-2231-TC-U4C-F-1 to make cantilever beam groove weld BK001-026-002. This QA Inspector observed a welding current of approximately 315 amps 31.5 volts and Mr. Xi Xuehua is certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Liu Daiquan, stencil 066401 has used welding procedure WPS-B-P-2231-U2F-1 to make flux cored weld SEG051A-005. This QA Inspector observed that ZPMC QC Inspector Mr. Li Ming Yang has recorded a welding current of 296 amps and 30.7 volts. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Xue Xiang Liang, stencil 066478 has used welding procedure WPS-B-P-2213-B-U2 to make shielded metal arc weld SP770-001-001. This QA Inspector observed that ZPMC QC Inspector Mr. Li Ming Yang has recorded a welding current of 150 amps. This QA Inspector observed that Mr. Xue Xiang Liang is certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

See above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By: Dawson,Paul

Quality Assurance Inspector

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Reviewed By: Carreon,Albert

QA Reviewer